

What is claimed is:

1. A method for assembling a rotor of a power transmission device having an oscillator and a rotor rotatably assembled into said oscillator, said rotor making rotations and oscillations of said oscillator, the method comprising the steps of:

loading a plurality of rolling elements to be arranged between said rotor and said oscillator via a retainer for positioning said rolling elements, from inside said retainer; and

assembling said rotor into inside said loaded rolling elements.

2. The method for assembling a rotor according to claim 1, wherein the step of assembling said rotor into inside said loaded rolling elements includes the substeps of:

inserting an inner support ring into inside said loaded rolling elements, said inner support ring being arranged radially inside a circle connecting the rolling centers of said rolling elements and perforated with a plurality of inner pockets for allowing said rolling elements to be partially exposed to its inner side;

inserting said rotor into an interior space of said inner support ring.

3. The method for assembling a rotor according to claim 2, includes the substep of pulling out said inner support ring.

4. The method for assembling a rotor according to claim 1, wherein the step of assembling said rotor into inside said loaded rolling elements includes the substeps of:

inserting a dummy rotor pressing said loaded rolling elements outward; and

inserting said rotor so as to replace said dummy rotor.

5. The method for assembling a rotor according to claim 1, wherein the step of assembling said rotor into inside said loaded rolling elements includes the substeps of:

inserting a dummy rotor having almost the same shaft diameter as that of said rotor into inside said rolling elements; and

inserting said rotor so as to replace said dummy rotor.

6. The method for assembling a rotor according to claim 1, wherein

the step of assembling said rotor is followed by step of fitting a rotor ring for restraining axial movement of said rolling elements onto an outer periphery of said rotor.

7. A sliding structure of a rotor and an oscillator of a power transmission device having an oscillator and a rotor rotatably assembled into said oscillator, said rotor making rotations and oscillations of said oscillator, the sliding structure comprising:

a plurality of rolling elements arranged between said rotor and said oscillator; and

a retainer having a support ring being arranged radially outside a circuit connecting the rolling centers of said rolling elements and perforated with a plurality of pockets for allowing said rolling elements to be partially exposed to its outer side, wherein

a protrusion for restraining axial movement of said rolling elements is provided on only one axial end of an outer periphery of said rotor.

8. The sliding structure of a rotor and an oscillator according to claim 7, wherein

said retainer has side ring being extended from an axial end of said support ring to avoid said rolling elements from slipping off.

9. The sliding structure of a rotor and an oscillator according to claim 7, wherein

an inner periphery of said support ring lies at least 1.05 times radially outside the circle connecting the rolling centers of said rolling elements.